Commodity Highlight: Raspberries

The United States is the world's third-largest producer of raspberries, accounting for about 12 percent of total production during 2000-2004. U.S. production is surpassed by the Russian Federation (34 percent of total) and Serbia (18 percent of total) where harvested acreage is much larger. Other leading producers include Poland, Germany, Ukraine, Canada, Hungary, France, and the United Kingdom.

Raspberries belong to the genus Rubus and is a member of the Rosaceae (rose) family. It is closely related to the strawberry. Cultivated raspberries in North America are derived mainly from two species, the red raspberry (Rubus idaeus) and the black raspberry (Rubus occidentalis). The black raspberry is native to North America but the red raspberry, which is native to Asia Minor and largely grown in Europe, is more popular in commercial production in the United States because it is generally more cold-tolerant, higher yielding, and less prone to diseases. Black raspberries are mostly grown in home gardens or on small retail farms. Similarly, production of purple and yellow raspberries is very small.

While there are many varieties of raspberries grown in the United States for the fresh and processing markets, the red raspberry is generally of two main types. One type is the summer bearing variety because the fruit ripens in early- to mid-summer. The other type is the everbearing raspberry which produces a crop during the early summer from the previous season's growth and then produces another crop in the fall from the current season's growth. Increasing domestic production of both these types, along with growing imports, have given domestic consumers greater and more year round access to the fruit.

Domestic Production Concentrated In Three States

According to the *Census of Agriculture*, there were 4,521 farms in 46 U.S. States that produced raspberries in 2002. Although production occurs across much of the country, most of it is concentrated in Washington, California, and Oregon. These three States had the largest acreage devoted to raspberry production in 2002, and together accounted for 80 percent of the U.S. total. Michigan, Pennsylvania, New York, Ohio, Minnesota, Wisconsin, and Massachusetts had the next largest acreages for a total of 13 percent. Because raspberries require relatively cool summers, commercial production has not really adapted well in the southern United States where summers are typically hot and often humid. In 2002, acreage in the southern United States was approximately only less than 1 percent.

In this report, the discussion on industry production and price trends will only reflect data for the three primary raspberry-producing States. Annual production statistics on U.S. raspberries is not available for all States. The U.S. Department of Agriculture's National Agricultural Statistics Service reports yearly production only for Washington (red only), Oregon (red and black), and California (total only). Reporting of annual black raspberry production in Washington was discontinued in 1988. However, based on the *2002 Census of Agriculture*, black raspberries in Washington were produced by 37 farms on a total of 18 acres that year. This represents a small segment of Washington's raspberry-growing industry. Farm numbers for black raspberries accounted for 9 percent of the total raspberry farms in Washington and the corresponding planted acreage was less than 1 percent.

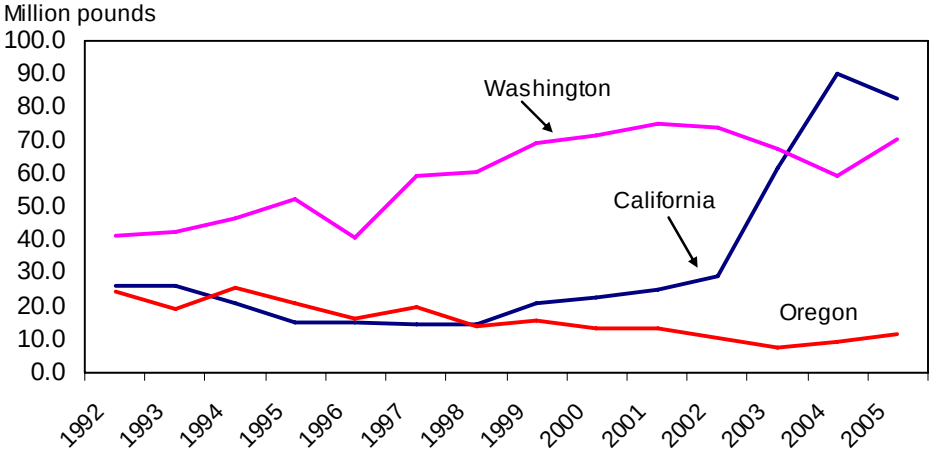
California Production Surpasses Washington

Washington was the Nation's number one producer of raspberries until it was surpassed recently (2004) by California's total raspberry production (fig. 4). Crop size in California (all varieties) during the 1990s averaged almost 20 million pounds, 60 percent lower than what was normally produced in Washington for red raspberries. From 2000-2002, average production in California reached 25.6 million pounds, the same time Washington was experiencing peak levels of production and below-average grower prices, especially for their crop going to processors.

Since Washington's record-large crop of 75.1 million in 2001, acreage and yield reductions have led to production declines during 2002 to 2004. Harvested acreage declined from 9,500 acres in 1999 to 9,000 acres in 2004, and yields also fell from the all-time high of 7,900 pounds per acre in 2001 to 6,600 in 2004. Meanwhile, a reverse in this trend has been occurring in California, more so in recent years, narrowing the gap in production between the two States. Producer response to favorable pricing of the California crop has encouraged continued expansion. Harvested acreage in California has increased each year since 1999, more than doubling in size and reaching 4,200 acres in 2005. Average yields have increased for most of this period, reaching a peak of 22,000 pounds per acre in 2004. California produced a record crop of 90.0 million pounds in 2004, while Washington's crop continued to decline to 59.4 million pounds. California only had less than half of the acreage harvested in Washington during 2004, but yields were nearly three times higher. Increased acreage and improved yields in 2005 have brought Washington's production back up to 70.3 million pounds, but California continued to take the lead, with 82.5 million pounds.

Figure 4

Raspberry production in three major States*



* Includes red raspberries for Washington, all for California, and red and black raspberries for Oregon.

Source: *Noncitrus Fruit and Nuts Summary (various issues)* , National Agricultural Statistics Service, U.S. Department of Agriculture.

Nearly all of California's production is grown in Santa Cruz, Ventura, and Monterey Counties. About 70 percent of the raspberry acreage in Washington is in Whatcom County, and another 24 percent is in Skagit, Clark, and Cowlitz Counties. In Oregon, production acreage is mostly concentrated in Washington (37 percent), Clackamas (29 percent), Multnomah (17 percent), and Marion (12 percent) Counties.

Markets Differ for Major Raspberry-Producing States

Raspberry production in Washington and Oregon is heavily geared toward the processing sector. An average of 96 percent of Washington's red raspberry production was marketed to processors over the last 5 years (2001-2005) while in Oregon, this share averaged 90 percent of the State's combined red and black raspberry output. NASS does not breakdown California's production into fresh market and processing, however, approximately 95 percent of its raspberry crop is sold in the fresh market, according to a farm advisor at the University of California-Davis. Under this assumption, it is estimated that California growers produced about 78.4 million pounds of raspberries for the fresh market in 2005 and approximately 4.12 million pounds for the processing sector. In the same year, processing production totaled 68.9 million pounds of red raspberries in Washington and 10.1 million pounds of both red and black raspberries in Oregon.

By far, Washington remains the top supplier of raspberries for processing in the United States, accounting for an estimated over 80 percent of total processing volume. Oregon ranks second, accounting for over 10 percent.

Processing Dominates Production, but Growth in Fresh Market Faster

Based on production data from the three States and on the assumption that only about 5 percent of California's raspberry crop is used for processing, estimates on the three-State fresh and processing output were derived for the period 1992-2005. The processing sector is still the largest market for domestically produced raspberries, but more rapid growth in fresh-market production in recent years has narrowed the difference between the three-State fresh-market and processing production (fig. 5). Estimated three-State production for fresh use grew at an average rate of 29 percent annually over the last 5 years (2001-2005), while average annual production growth for processing use was 1 percent.

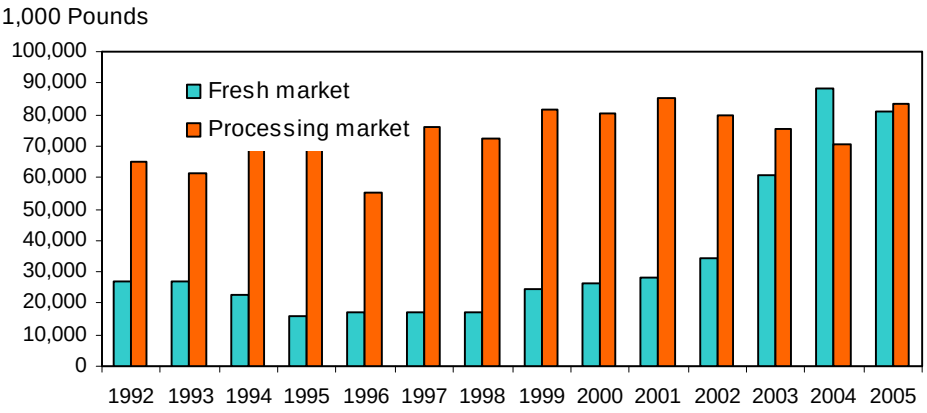
There are many food products that make use of raspberries. Much of the fruit destined for processing gets frozen in bulk containers for institutional use or is reprocessed into jams, jellies, preserves, pie filling, ice cream, and yogurt. Some of the fruit is combined with sugar and packaged in retail-sized containers. The best quality whole fruit is typically preferred for processing into Individually Quick-Frozen (IQF) berries, while the lower quality fruit is usually destined for juice.

Processing Use Farm Prices More Volatile Than Fresh-Market Prices

The weighted-average grower price for Washington and Oregon red raspberries used for processing fluctuated year-to-year between 1992 and 2005 (fig. 6). During

Figure 5

Raspberries: Fresh-market and processing production in Washington, Oregon, and California*



* Production breakdown in California is estimated based on assumption that 95 percent of the crop goes to the fresh market.

Source: *Noncitrus Fruit and Nuts Summary* (various issues), National Agricultural Statistics Service, U.S. Department of Agriculture (USDA); California estimates derived by the Economic Research Service, USDA.

most of this period, prices moved inversely with production. Little production growth for processing use berries together with volatile prices suggest that processor demand for the berries was fairly steady over time. In the fresh market, rising grower prices in Washington and Oregon, in the face of increasing production during 2004 and 2005, suggest strong market demand (fig. 7). This is similar to the trend experienced in the market during the early 1990s.

In California, the season-average grower price for raspberries reported by NASS is heavily geared toward the fresh market because a majority of the crop goes to this market. Grower prices have also remained volatile over the last several years. Producer response to strong market demand is indicated by increases in harvested acreage in recent years. Coinciding with the acreage expansion are high grower prices, averaging $2.00 per pound, and increased production, particularly in 2003 and 2004.

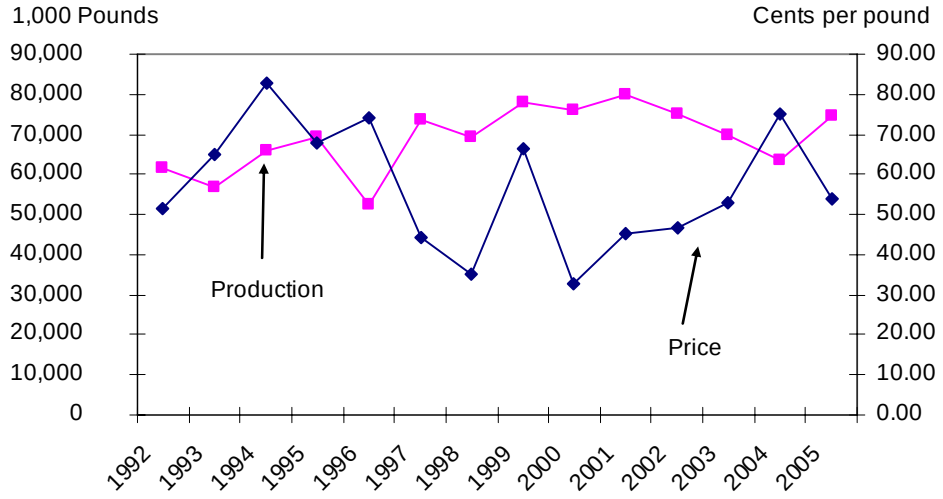
Generally, prices received by growers for fresh-market raspberries are almost always at a premium over the berries for processing. In Oregon, prices for fresh-market red raspberries averaged more than double the prices for processing berries during 2001 to 2005, while in Washington fresh-market prices were more than three times higher. Partly contributing to the higher value in the fresh market is the higher harvesting and marketing costs associated with hand picking the delicate berries and packaging most of them in retail-sized containers.

Demand for Fresh Raspberries Rising

Raspberries continue to rank as the third most popular berry in the United States for fresh use, after strawberries and blueberries. Consumption has grown for all these berries over the last several years, but annual per capita consumption increases for raspberries averaged 3 to 7 percent higher than for strawberries and blueberries from 2000-2005.

Figure 6

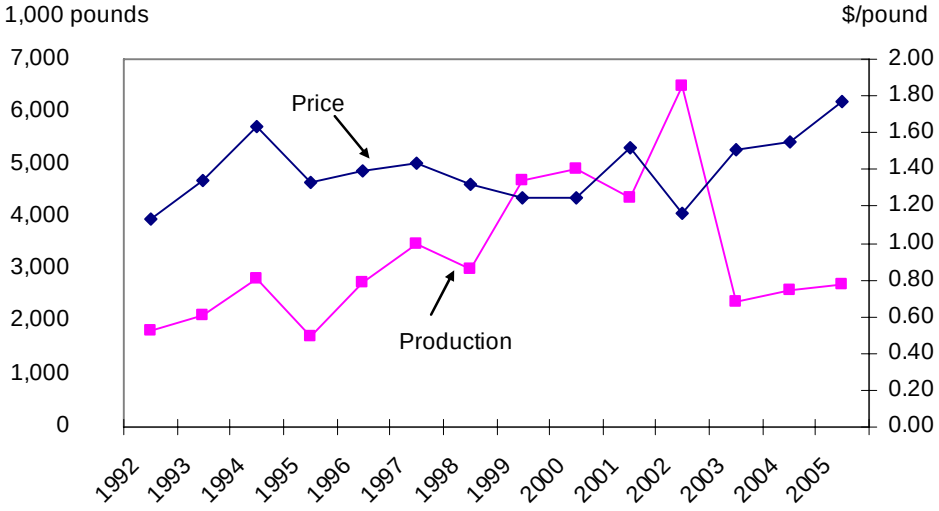
Washington and Oregon red raspberries: Combined processing production and weighted-average grower price



Source: *Noncitrus Fruit and Nuts Summary* (various issues), National Agricultural Statistics Service (NASS), U.S. Department of Agriculture (USDA); weighted-average price derived from NASS data by the Economic Research Service, USDA.

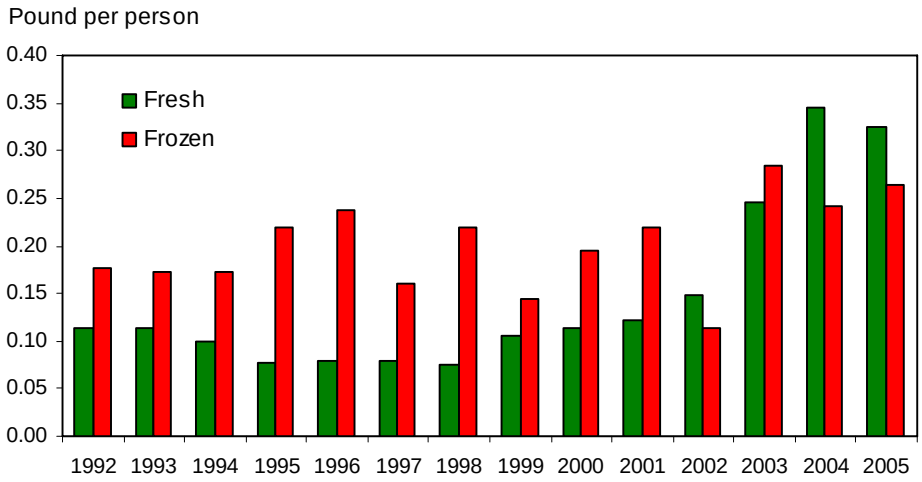
Figure 7

Washington and Oregon Red Raspberries: Combined fresh-market production and weighted-average grower price



Source: *Noncitrus Fruit and Nuts Summary* (various issues), National Agricultural Statistics Service, U.S. Department of Agriculture; weighted-average price derived from NASS data by the Economic Research Service, USDA.

Figure 8
U.S. per capita consumption of fresh and frozen raspberries*



* Fresh-weight equivalent basis.
Source: Estimated by the Economic Research Service, USDA.

U.S. consumption of fresh raspberries has tripled since the early 1990s, to an estimated 0.33 pound per person in 2005. While up sharply from earlier in the decade, much of the growth in fresh-market consumption occurred in recent years (fig. 8). Meanwhile, U.S. frozen raspberry consumption has fluctuated between 0.10 pound and 0.30 pound per person, fresh-weight equivalent basis, during 1992-2005.

Rapid production growth in California in the past few years has been a major driving force behind the sharp growth in consumption observed in the domestic fresh market beginning in the late 1990s. Relatively low grower prices in California around the mid-1990s kept domestic fresh-market production low during that period, limiting market availability and resulting in fairly flat U.S. consumption of fresh raspberries from around 1995 through 1998. Higher prices in recent years, however, triggered in part by strong market demand, have encouraged increased production. Production in California reached a peak in 2004, driving consumption that year to a record-high, estimated at 0.35 pound per person. That was also the first year that fresh raspberry consumption surpassed frozen consumption on a per capita basis.

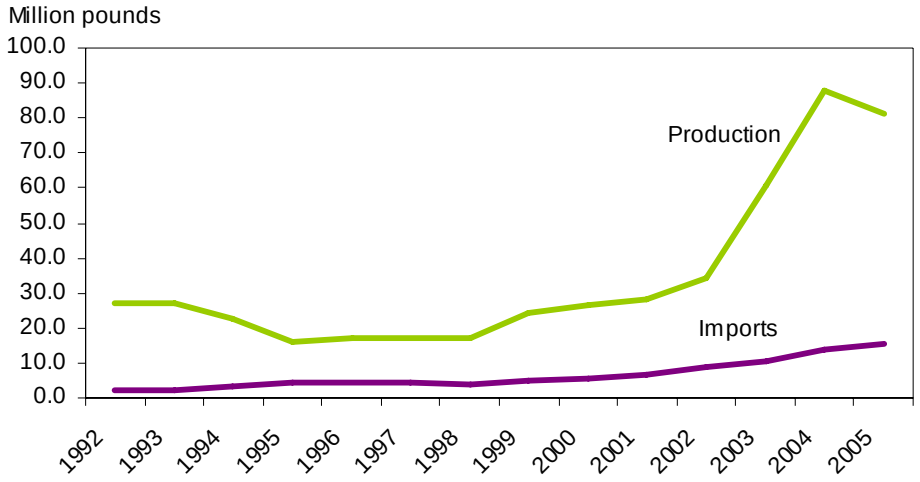
Acreage expansion in California and the development of improved fresh-market varieties targeting fruit appearance, flavor, size, and durability, as well as productivity of the shrubs all have contributed to the marketability of the fruit, either by increasing availability and/or enhancing its appeal to consumers. Also, with a growing consumer awareness of the benefits of eating a healthy diet, it helps that raspberries are a very versatile fruit with known health-promoting attributes.

Imports Rising for Both Fresh and Frozen Raspberries

Fresh raspberry demand in the United States has been met mostly by domestic production which accounts for over 80 percent of U.S. fresh raspberry consumption.

Figure 9

U.S. fresh raspberry supply: Domestic production and imports, 1992-2005



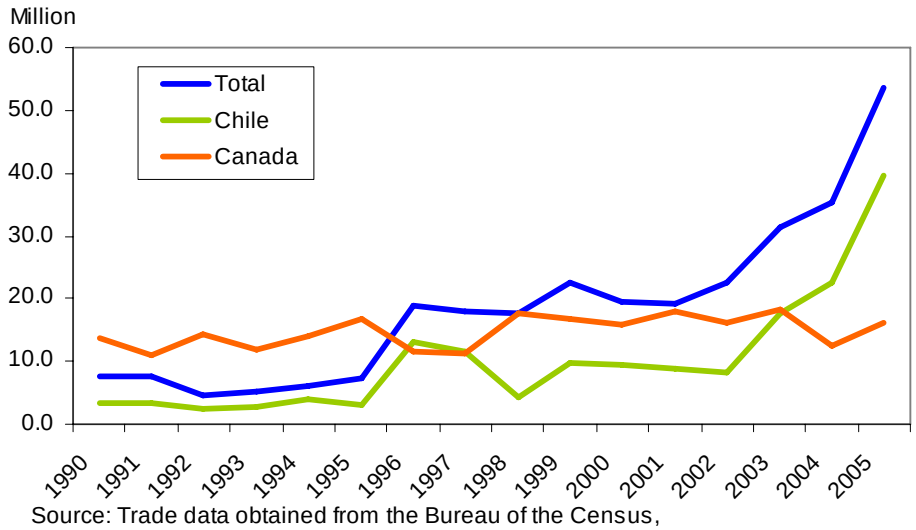
Source: Fresh-market production derived from data provided by the National Agricultural Statistics Service, USDA; trade data obtained from the Bureau of the Census, U.S. Department of Commerce.

Although small relative to domestic production, fresh imports have experienced remarkable growth, especially in recent years (fig. 9). U.S. raspberry imports for fresh use have grown more than six-fold since 1992, reaching a record 15.4 million pounds in 2005. The bulk of fresh imports in the United States come from Chile, Mexico, and Canada. Most shipments from Chile and Mexico arrive from November through May, and those from Canada arrive mostly from June through August.

Throughout the 1990s, Canada exported the largest volume of fresh raspberry shipments to the United States, averaging almost 80 percent of total import volume. However, despite higher overall shipments, much of Canada's fresh shipments to the United States are used by the processing sector, and only about 5 percent go to the fresh market, downplaying its role in the fresh market. Beginning in the mid-1990s, a downward trend in Canada's overall fresh shipments to the United States has moved together with rapid increases in imports from Chile and Mexico, narrowing the gap in their shipments in recent years. As of 2004 and 2005, each of these three countries supplied around one-third of total fresh import volume, and imports from Chile and Mexico had surpassed total shipments from Canada.

U.S. imports of frozen raspberries also grew sharply over the last 14 years, increasing from 17.7 million pounds in 1992 to a record 60.2 million pounds in 2005. During 1992-1995, imports accounted for approximately 20 percent of overall frozen raspberry supplies available in the U.S. market, including ending-year cold storage stocks. By 2001-2005, this share averaged 31 percent. Chile and Canada supply the bulk of the frozen imports to the United States, accounting for over 90 percent of the total import volume. Shipments from Canada, including fresh volume going to processors, have remained relatively steady since the 1990s while shipments from Chile have generally been on an upward trend, showing sharp increases during 2003 to 2005 (fig. 10). Other countries supplying smaller quantities of frozen raspberry to the United States, including Serbia, Poland, China, Bulgaria, and Argentina, have also increased their U.S. shipments in recent years.

Figure 10
U.S. imports of frozen raspberries*



Source: Trade data obtained from the Bureau of the Census, U.S. Department of Commerce.

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